Appl. No.

09/851,261

Filed

May 8, 2001

3. (Amended) A method for controlling a laser welding head comprising the steps of:

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irradiating plural linear laser beams to a target area of members to be welded so as to be crisscrossed over a seam line to measure a welding state,

taking, as an image, said welding state in a CCD camera by means of linear laser beams reflected by said members,

processing said image of said welding state, and controlling a laser welding head based on process data of said image.

7. (Amended) A laser welding head-controlling system for controlling the position of a laser welding head with respect to an target area of objects to be welded, comprising:

at least two semiconductor lasers for emitting linear laser beams configured to be crisscrossed over a seam line at a predetermined angle toward the target area;

a CCD camera provided with a band-pass filter, through which linear laser beams reflected by the objects pass exclusively, to generate an image of the target area; and

an image processor for processing the image of the target area to determine the progress of welding, thereby controlling the position of a laser welding head.

10. (Amended) A method for controlling the position of a laser welding head with respect to a target area of objects to be welded, comprising the steps of:

emitting at least two linear lasers beams so as to be crisscrossed over a seam line at a predetermined angle toward the target area;

generating an image of the target area exclusively from linear laser beams reflected by the objects passing through a band-pass filter, using a CCD camera provided with the band-filter;

processing the image of the target area to determine the progress of welding; and controlling the position of the laser welding head.

REMARKS

Claims 1, 3, 7 and 10 have been amended by incorporating the limitation of "linear laser beams configured to be crisscrossed over a seam line." Support for the amendments can be found on page 4, lines 25-26 and in Figure 1 of Applicant's specification, for example. Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE." The